SONY®

AIR BAND/FM/AM PLL SYNTHESIZED RECEIVER
PSB/AIR/FM/AM PLL SYNTHESIZED RECEIVER

# AIR-7


**OPERATING INSTRUCTIONS** page 6

**MODE D'EMPLOI** page 25

**MANUAL DE INSTRUCCIONES** página 45

Photo: Type 1

© 1984 by Sony Corporation

Before operating the set, please read this manual thoroughly.
This manual should be retained for future reference.

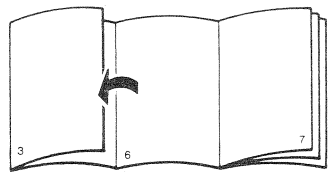
As you read, refer to the photo and illustrations marked [A] – [L] on pages 3 to 5.

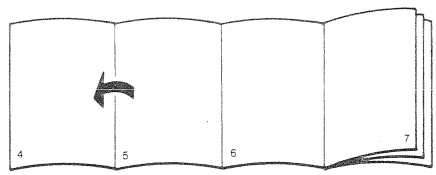
Lire attentivement ce mode d'emploi avant la mise en service de l'appareil et le conserver pour toute référence ultérieure.

Lire ce mode d'emploi en se reportant à la photo et les illustrations marquées [A] – [L] des pages 3 à 5.

Antes de usar el aparato, lea este manual detenidamente.
Consérvelo para futuras referencias.

Al leer, refiérase a la foto y las ilustraciones marcadas [A] – [L] de las páginas 3 a 5.



A

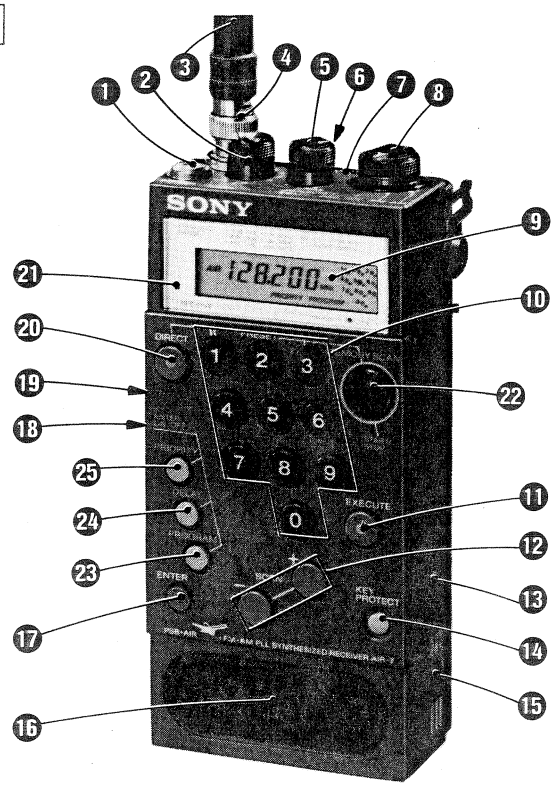
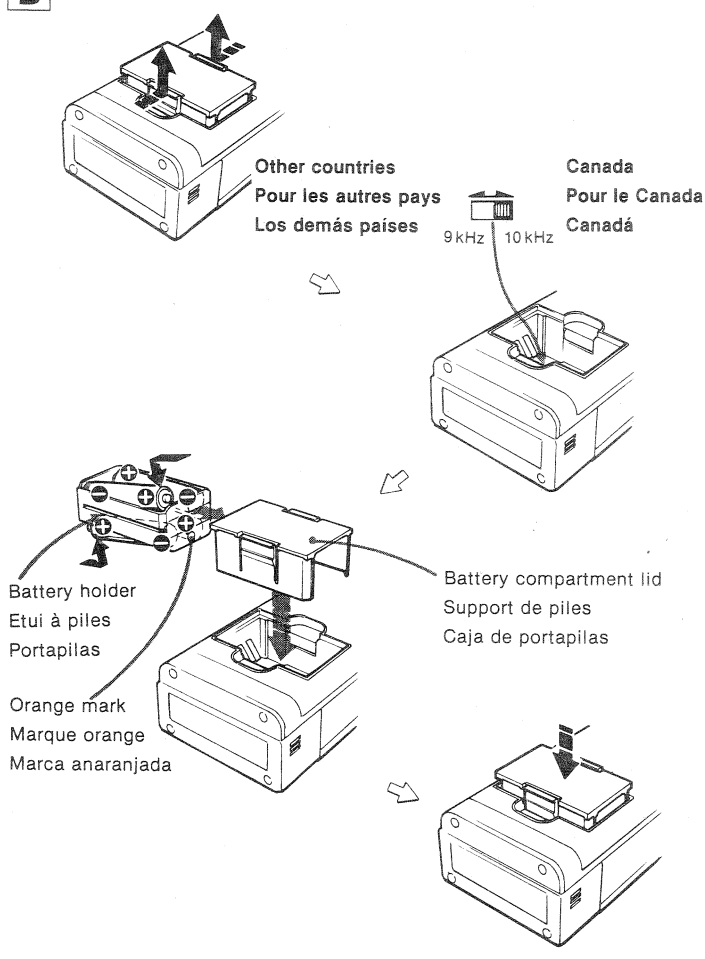
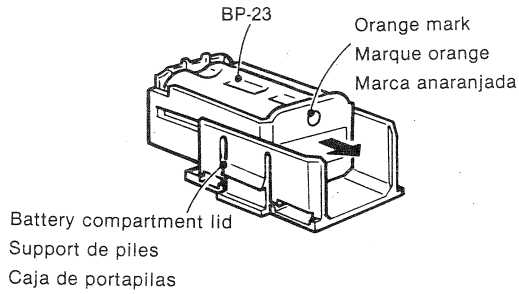



Photo: Type 1

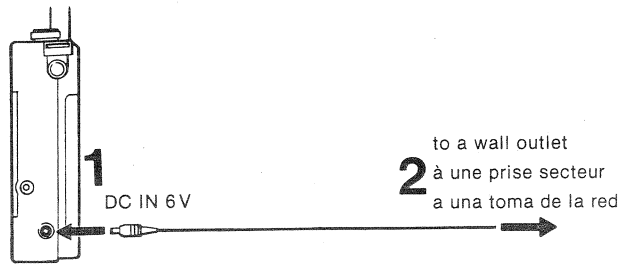
B



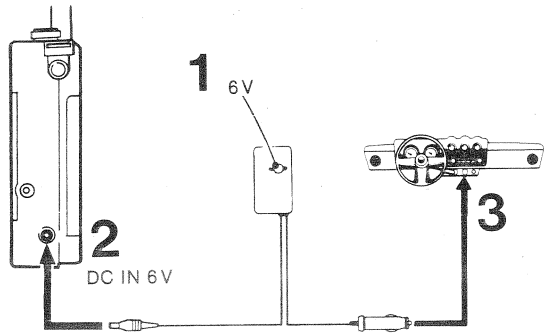
C


BP-23
Orange mark
Marque orange
Marca anaranjada
Battery compartment lid
Support de piles
Caja de portapilas

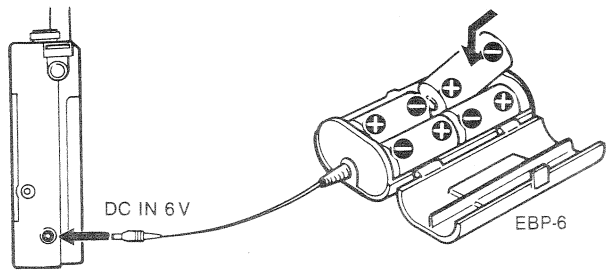
D


1
DC IN 6 V
2
to a wall outlet
à une prise secteur
a una toma de la red

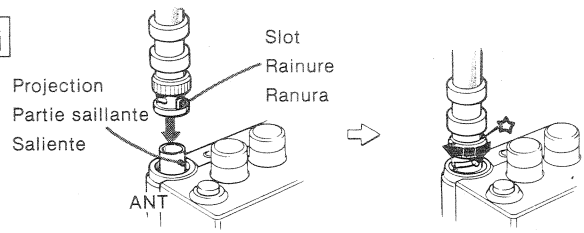
E


1
6 V
2
DC IN 6 V
3

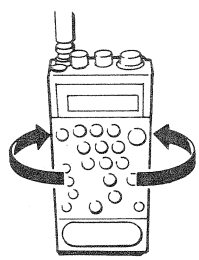
F


DC IN 6 V
EBP-6

G


Slot
Rainure
Ranura
Projection
Partie saillante
Saliente
ANT

H



**I**

**Air band/PSB external antenna**

**Antenne extérieure de bande de fréquences de radionavigation aérienne/PSB**

**Antena exterior de la banda de control del tráfico aéreo/PSB**

**FM external antenna**

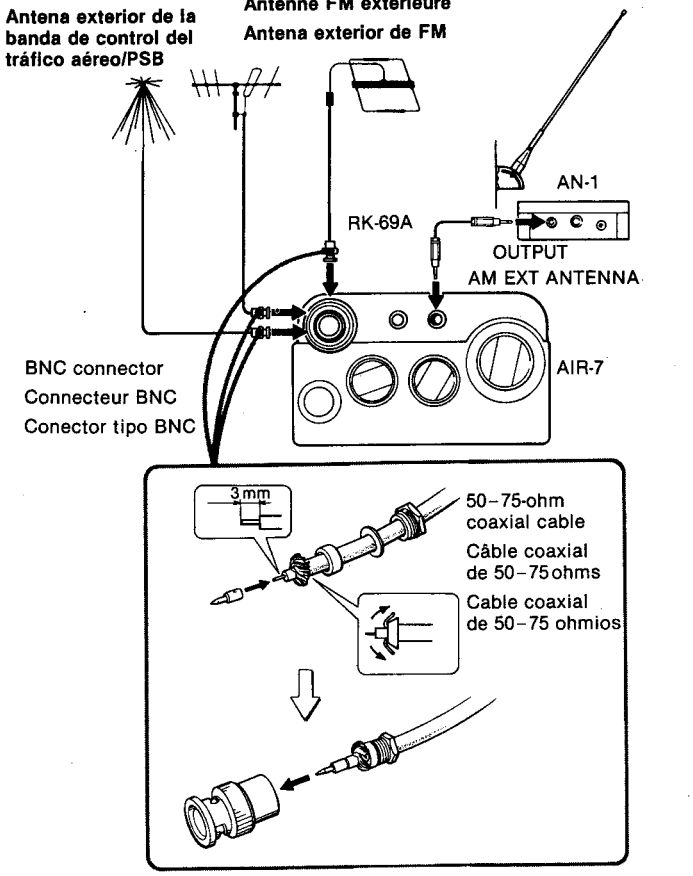
**Antenne FM extérieure**

**Antena exterior de FM**

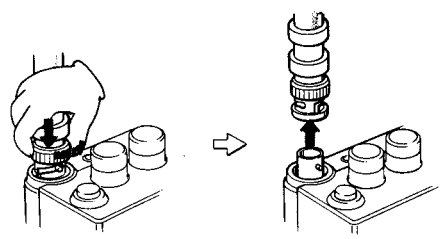
**AM external antenna**

**Antenne AM extérieure**

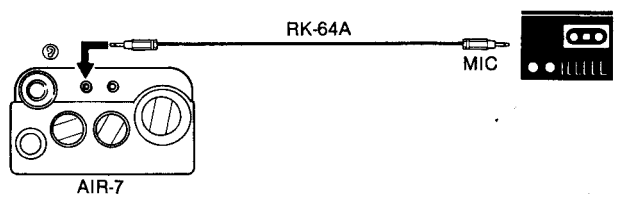
**Antena exterior de AM**



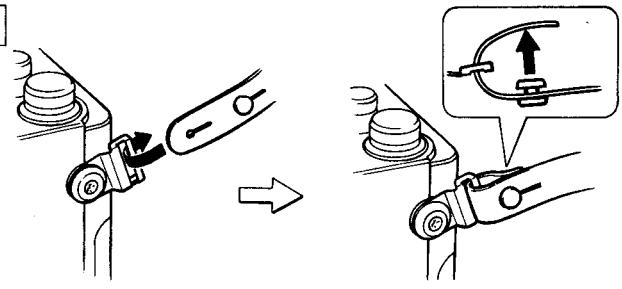

**J**



**K**




**L**



This instruction manual covers the following four models:
Type 1 can receive air band, PSB*, AM and FM (76.0–108.0 MHz) broadcast bands.
Type 2 can receive air band, PSB, AM and FM (87.6–108.0 MHz) broadcast bands.
Type 3 can receive air band, AM and FM (76.0–108.0 MHz) broadcast bands.
Type 4 can receive air band, AM and FM (87.6–108.0 MHz) broadcast bands.
The differences between the models are due to the regulations of your country. Their performance and characteristics are identical except for the tuning band of the receiver. The differences are clearly described in the text.

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* PSB (Public Service Band)
On the PSB, you can monitor police, fire, forestry conservation, VHF weather, marine, highway maintenance, land mobile, and other public safety radio services. The general frequency allocation is shown on the dial scale.
NOTICE: In certain localities, it is illegal to listen to police or other governmental transmissions. Check with your local authorities.

# FEATURES

- The AIR-7 portable receiver receives the air traffic control frequencies, 108–136 MHz, as well as standard FM and AM broadcasts. With type 1 and 2 models, PSB, 144–174 MHz, can also be received.
- The quartz controlled PLL (Phase Locked Loop) synthesizer system uses a microcomputer to make pinpoint tuning easy. The tuned frequency is displayed digitally.
- Choice of direct, scan, manual or memory tuning.
- Up to 40 (type 1 and 2 models) or 30 (type 3 and 4 models) stations can be memorized so that they can be tuned in at the press of a key.
- Air band and PSB can be received more easily with the memory scanning, program function, priority function and delay function.
- Squelch control to suppress noise while tuning and during intervals between communications.
- The key protect function operates at the press of a key to lock the keys on the front face so they cannot be operated by accident.
- Helical antenna for high sensitivity and selectivity has BNC connector for attachment to the receiver.
- Four different power sources: batteries, house current, rechargeable battery pack or car battery.

# PRECAUTIONS

- Operate the receiver only on 6 V dc with four IEC designation R6 batteries (size AA).
For ac operation, use the ac power adaptor recommended for this set.
For car battery operation, use the car battery cord recommended for this set.
- Use the set within a temperature range of 0°C to 40°C (32°F to 104°F). If it is used in temperatures outside this range, numbers may appear on the display which have nothing to do with the frequency being received. If it is used in temperatures lower than this range, the numbers displayed may changed very slowly. These irregularities will disappear and there will be no damage to the set when the set is used in its recommended temperature range.
- Do not leave the set near heat sources, such as radiators or air-ducts, or in a place subject to direct sunlight, excessive dust, moisture, rain, mechanical vibration, or shock.
- Should any solid object or liquid fall into the set, remove the batteries, and have the set checked by qualified personnel before operating it any further.
- When the case becomes soiled, clean it with a soft cloth dampened with a mild detergent solution. Never use abrasive cleansers or chemical solvents, as they may mar the case.
- In vehicles or in buildings, radio reception may be difficult or noisy. Try listening near a window.
- When there is lightning and you are using an external antenna, immediately disconnect the ac power adaptor (if connected) from the wall outlet. Never touch the antenna wire when there is lightning storm.
- Reception of 109.875 MHz, 166.17 MHz, 167.08 MHz and 455 kHz may be difficult due to internal spurious signals generated by the built-in oscillators.

If you have any question or problem concerning your set that is not covered in this manual, please consult your nearest Sony dealer.

# LOCATION AND FUNCTION OF CONTROLS

See photo [A] on page 3.

**❶ POWER switch**
Depress to turn on the receiver (▬ ON).
To turn the receiver off, press it again (▬ OFF).

**❷ VOL (volume) control**
Turn clockwise for more volume. It can be depressed (▬) to allow the SQL (squelch) control to be adjusted more easily.

**❸ Helical antenna** (supplied)
Used for air band, PSB and FM reception.

**❹ ANT (antenna) connector**
Connect the supplied helical antenna or the BNC connector of an optional external antenna for air band, PSB and FM reception.

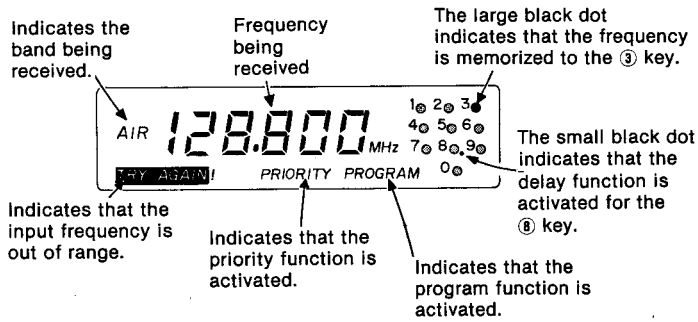
**❺ SQL (squelch) control**
Used for cutting background noise while tuning and during intervals between communications. Normally, depress the control (▬ AUTO). Press it again to set to ▬ MANUAL, and adjust the squelch level manually.

**❻ ⑫ (earphone) jack**
Connect the supplied earphone for private listening.
This jack is also used for connecting an external speaker or recording broadcast on a tape recorder.

**❼ AM EXT (external) ANTENNA jack**
Connect an optional external antenna for AM reception.

**❽ Band selector**
Select the desired band.

**❾ Display (LCD)**
Displayed as follows:


Indicates the band being received.
Frequency being received
The large black dot indicates that the frequency is memorized to the ③ key.
AIR
128.800
MHz
1 2 3
4 5 6
7 8 9
0
TRY AGAIN!
PRIORITY
PROGRAM
The small black dot indicates that the delay function is activated for the ⑧ key.
Indicates that the input frequency is out of range.
Indicates that the priority function is activated.
Indicates that the program function is activated.

**❿ Counter keys**
Used to input a frequency for direct tuning, to memorize a station and to receive a memorized station.

**⓫ EXECUTE key**
Used for direct tuning.
After pressing the DIRECT key and inputting the desired frequency with the counter keys, press this key to tune in the frequency.

**⓬ SCAN keys**
Used for scan tuning and manual tuning.
When you press the ⊕ (plus) or ⊖ (minus) key, the frequency is increased or decreased by the intervals shown on page 13.
If you keep the key pressed, the frequency changes continuously.

**⑬ LIGHT switch**
The display is illuminated when this switch is pressed.

**⑭ KEY PROTECT key**
When this key is pressed once, the keys on the front face are locked and no longer function.
To release this key, press it again.

**⑮ DC IN 6 V (external power input) jack**
For operation from an external power source.

**⑯ Speaker**

**⑰ ENTER key**
Used to memorize a frequency.
After inputting the desired frequency, while pressing this key, press the counter keys at which the frequency is to be memorized.

**⑱ Battery compartment (rear)**

**⑲ 9 kHz/10 kHz selector** (inside battery compartment)
Used to change the MW tuning interval.

**⑳ DIRECT key**
Used for direct tuning.

**㉑ RECEIVE indicator (LED)**
When a signal or a noise is received, this indicator lights in red.

**KEYS FOR AIR BAND AND PSB RECEPTION**
(indicated in green)

**㉒ MEMORY SCAN key**
Used for memory scan tuning.

**㉓ PROGRAM key**
Used to initiate the program function. See page 20.

**㉔ DELAY key**
Used to initiate the delay function. See page 22.

**㉕ PRIORITY key**
Used to initiate the priority function. See page 21.

# POWER SOURCES

**The internal batteries are also used to back up the built-in microcomputer. Be sure to keep the batteries installed even when the receiver is operated on other power sources.**

## BATTERIES

### Battery installation

Insert four IEC designation R6 batteries (size AA) with correct polarity, following illustration [B] on page 3.

Make sure that nothing is connected to the DC IN 6 V jack when you want to operate the set on its internal batteries.

### Battery life

You can expect Sony SUM-3(NS) New Super batteries to last for approx. 9 hours for air band, PSB and AM reception and approx. 10 hours for FM reception. This assumes listening for four hours a day at normal volume. When the sound becomes weak or distorted and the display becomes faint, replace all batteries with new ones.

### Note on replacement of the batteries

When replacing the batteries, be sure to install new batteries **within 3 minutes.** If the batteries are not installed within 3 minutes, all memory contents will be erased.

### Note

When the atmosphere is especially dry, static electricity may cause the following:

- The display may disappear.
- Random figures may appear in the display.
- The indication preset at the factory—AIR 108 MHz, PSB 144 MHz, FM 76.00 MHz (type 1 and 3 models), FM 87.60 MHz (type 2 and 4 models) or AM 531 kHz (530 kHz in Canada)—may appear in the display.
- The frequencies cannot be tuned in.

If any of these things occur, remove and re-install the batteries.

## RECHARGEABLE BATTERY PACK

Install the Sony BP-23 rechargeable battery pack (optional) into the battery case in place of the batteries.

See illustration [C] on page 4.

To charge the battery pack, connect the receiver to a wall outlet using the ac power adaptor listed below.

Charging time is about 4.5 hours. Approx. 5 hours of air band and PSB reception is possible.

## HOUSE CURRENT

Connect the optional ac power adaptor recommended below to the receiver DC IN 6 V jack, then to a wall outlet. See illustration [D] on page 4.

| Where used | AC power adaptor | Input voltage of adaptor |
|---|---|---|
| Canada | AC-9 (available in Canada) | 120 V ac, 60 Hz |
| Europe | AC-D4 (available in Europe) | 220 V ac, 50 Hz (110V ac adjustable, 50/60 Hz) |
| Other countries | AC-4A (available in other countries) | 110, 120, 220 or 240 V ac adjustable, 50/60 Hz |

## CAR BATTERY

Connect the optional Sony car battery cord DCC-127A or DCC-120 (for 12 V car battery), or DCC-240 (for 24 V car battery) as in illustration [E] on page 4.

- Before connecting, be sure to read the instruction manual for the car battery cord.
- Reception may be affected by ignition noise while the engine is running.

## BATTERY CASE

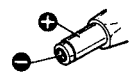
Insert four IEC designation R14 (size C) batteries with the correct polarity into the Sony EBP-6 battery case (optional), and connect the battery case to the DC IN 6 V jack as in illustration [F] on page 4.

Approx. 20 hours for air band, PSB and AM reception using the Sony SUM-2(NS) New Super batteries when listening for four hours a day at normal volume is possible.

**Caution:** When using an EBP-6 battery case, make sure that batteries and not the BP-23 rechargeable battery pack are installed in the set. If you use an EBP-6 battery case when a BP-23 rechargeable battery pack is in the set, charging from the EBP-6 to the BP-23 will begin, so the batteries in the EBP-6 will be drained.

**Note**

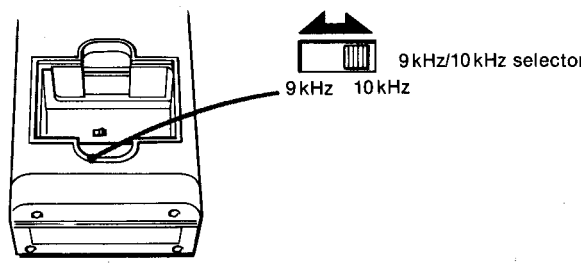
If a car battery cord or an ac power adaptor not manufactured by Sony is used, a fuse must be installed in the battery cord or the ac power adaptor and the polarity of the plug must be as illustrated.



## HOW TO CHANGE THE MW TUNING INTERVAL

The MW tuning interval is factory preset to 10 kHz (Canada) or 9 kHz (other countries) to match the local frequency allocation system. If you use the receiver in an area where the frequency allocation system is based on the other interval, change the position of the 9 kHz/10 kHz selector in the battery compartment as follows.

**rear**




1 Remove the batteries.
2 Switch the selector.
3 Wait at least 10 minutes, then put back the batteries in the compartment and close the lid.

**Notes**

- If you replace the batteries within approx. 10 minutes after the batteries are removed, the tuning interval will not be changed although the selector has been switched. Be sure to wait for at least 10 minutes.
- After changing the MW tuning interval, memorize the stations and functions again, as the previous memory may have been erased.

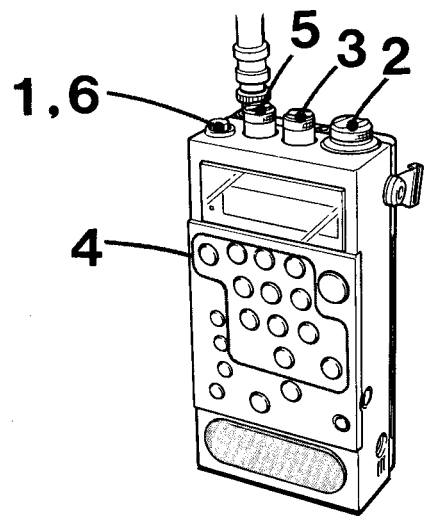
## INSTALLATION OF THE HELICAL ANTENNA

**For air band, PSB or FM reception,** use the supplied helical antenna.

Insert the projection of the set's ANT connector into the slot of the connector on the antenna, and turn the antenna clockwise until a click is heard. See illustration [G] on page 4.

# DIRECT TUNING

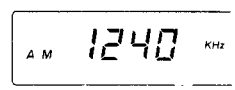
If you know the frequency of a station to be received, you can tune in the station easily by direct tuning.
The numbers in the illustration refer to the sequence of operation.




1 Depress the POWER switch (▬ ON).
2 Set the band selector to the desired band.
3 Set the SQL control to MIN.
4 Press the DIRECT key, input the frequency of the station to be received using the counter keys, then press the EXECUTE key. The station will be tuned in.

**Examples:** AM 1240 kHz (Canada)

DIRECT → 1 → 2 → 4 → 0 → EXECUTE

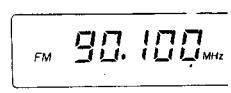



AM 2000 kHz

DIRECT → 2 → EXECUTE

FM 90.10 MHz

DIRECT → 9 → 0 → 1 → EXECUTE




5 Adjust the volume with the VOL control.
6 After listening, press the POWER switch again to turn the receiver off (▬ OFF).

**For AM reception,** the built-in ferrite bar antenna functions. Since this antenna is directional, rotate the set horizontally for optimum reception, if necessary.
See illustration H on page 4.

**Note:** After pressing the DIRECT key or a counter key, press the next key within 5 seconds. If you do not, the previous station will return.

The frequency received by this receiver is displayed in steps of the following intervals, depending on the bands.

AIR: 0.025 MHz
PSB: 0.005 MHz
FM: 0.050 MHz
MW: 9 kHz or 10 kHz*
LW: 1 kHz
SW: 1 kHz

This is because the frequencies are allocated at these intervals. Therefore, if you input a frequency between the interval, the frequency at the interval just below will be tuned in and displayed. For example, if you input AM 1,000 kHz with the tuning interval set to 9 kHz, AM 999 kHz will be tuned in and displayed.

* This tuning interval can be set to 10 kHz or 9 kHz by switching the 9 kHz/10 kHz selector in the battery compartment. See page 11.

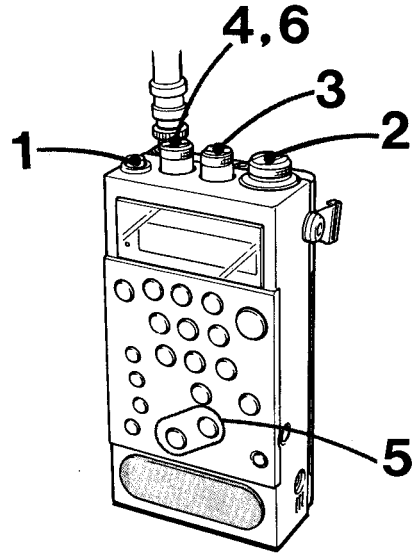
**If you input a wrong frequency**
Press the DIRECT key again and input the correct frequency.

**The TRY AGAIN ! indication**
If you input a frequency outside the frequency range (AIR 108–136 MHz, PSB 144–174 MHz, FM 87.6–108.0 MHz for type 2 and 4 models, FM 76.0–108.0 MHz for type 1 and 3 models, AM 150–2,194 kHz), the indication TRY AGAIN ! will blink in the display. When you input a proper frequency, TRY AGAIN ! indication will disappear. If you leave TRY AGAIN ! indication blinking, it will disappear after about 5 seconds, and the tuned station's frequency will reappear.

**Notes on antenna**
- If reception is unsatisfactory with the helical antenna or the built-in ferrite bar antenna, connect an external antenna. To connect an external antenna, see page 22.
- In vehicles or in buildings, reception may be difficult or noisy. Try listening near a window.

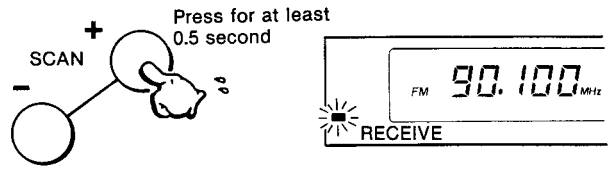
# SCAN TUNING

Use scan tuning to automatically scan the stations in the frequency range of the band being received. Scanning stops automatically at each station.
The numbers in the illustration refer to the sequence of operations.




1 Depress the POWER switch (▬ ON).
2 Set the band selector to the desired band.
3 Depress the SQL control (▬ AUTO ).
4 Turn the VOL control slightly clockwise.
5 Press the SCAN ⊕ or ⊖ key for at least 0.5 second to start scanning, then release the key. The display changes continuously and stops automatically when a station is received.

Pressing the ⊕ key, the tuned frequency is increased.
Pressing the ⊖ key, the frequency is decreased.




Repeat step 5 until the desired station is received.
6 Adjust the volume with the VOL control.

- For AM reception, if necessary rotate the set horizontally for optimum reception.
- To stop scanning, press the ⊕ or ⊖ key momentarily.

After listening, set the POWER switch to ▬ OFF.

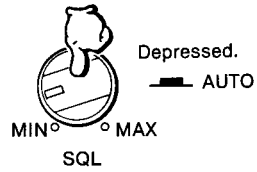
**If stations cannot be tuned in by scan tuning with the SQL control set to ▬ AUTO,** press the SQL control again (▬ MANUAL) and adjust the control. (See "How to use the SQL control" on page 15.)

**If scanning stops a little before a station,** tune in the frequency more precisely by manual tuning (See page 16.).

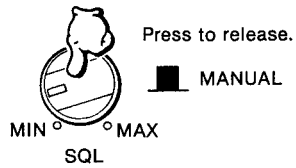
**Note on scanning**
Scanning is performed in the range of the band being received, at the intervals shown on page 13. When the upper limit of the frequency of that band is reached, the dial is scanned back to the lower limit, and vice versa.

**HOW TO USE THE SQL CONTROL**

Normally, depress the SQL control (▬ AUTO).
Signals and noise below the factory-set level will be suppressed.



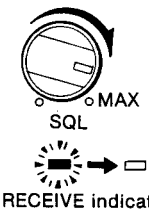

Press this control again to release it (▮ MANUAL), and adjust the squelch level.



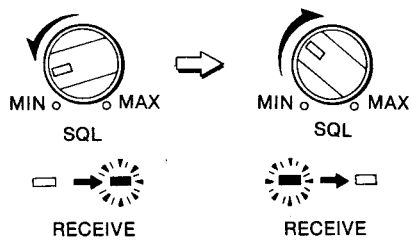

Turn the control counterclockwise (towards MIN) to receive weaker signals.

When stations cannot be tuned in with the SQL control set to ▬ AUTO during scan tuning and memory scan tuning, adjust the control as follows.

- **If scanning does not begin,** set the control to ▮ MANUAL and turn the control slowly clockwise (towards MAX). At the level at which the RECEIVE indicator goes out, scanning will begin. Be careful not to turn the control too far clockwise or weak signals will not be received.

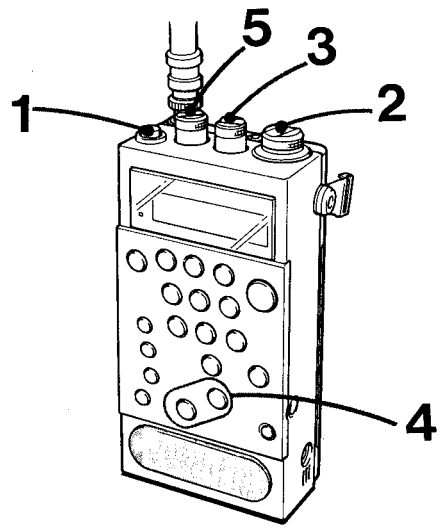



- **If scanning does not stop,** set the control to ▮ MANUAL and turn the control slowly counterclockwise (towards MIN). When the RECEIVE indicator lights up, turn the control clockwise again until the indicator goes out.



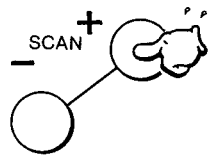
# MANUAL TUNING

Use manual tuning when you do not know the frequency of the station you want to tune in, or when you want to tune in a station more precisely after scan tuning.
The numbers in the illustration refer to the sequence of operations.

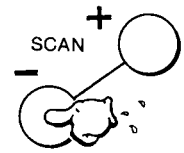



1 Depress the POWER switch (▬ ON).
2 Set the band selector to the desired band.
3 Set the SQL control to MIN.
4 ① Keep the SCAN ⊕ or ⊖ key pressed until the desired station is received.

For higher frequencies




For lower frequencies




② Press the SCAN key momentarily to tune the station precisely. Each time the key is pressed, the frequency is increased or decreased by the intervals shown on page 13.

5 Adjust the volume with the VOL control.

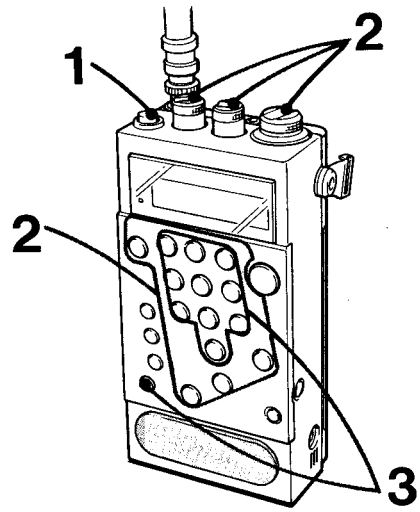
After listening, set the POWER switch to ■ OFF.

# MEMORY TUNING

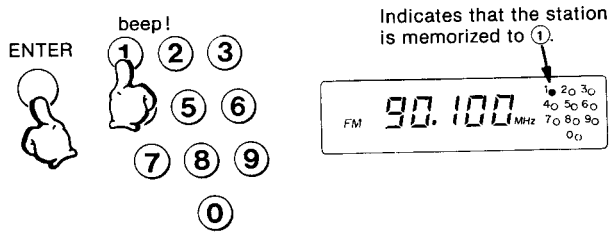
Once the frequencies of the stations you want to tune in are memorized, all you have to do is to push a key.
One FM, one AM, one AIR and one PSB station can be memorized to a key, or a total of 40 stations (type 1 and 2 models) or 30 stations (type 3 and 4 models) to all the counter keys.

## HOW TO MEMORIZE A STATION

The numbers in the illustration refer to the sequence of operations.




1 Depress the POWER switch (▬ ON).
2 Tune in the desired station using any tuning method—direct tuning (page 12), scan tuning (page 14) or manual tuning (page 16).
3 While pressing the ENTER key, press one of the counter keys. A beep sounds and the corresponding dot appears.



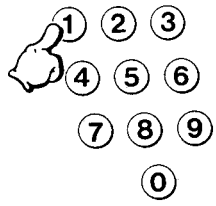

**Notes**

- The frequencies memorized to all the counter keys at the factory are as follows:
  AIR: 108 MHz
  PSB: 144 MHz
  FM: 76 MHz (type 1 and 3 models)
  87.6 MHz (type 2 and 4 models)
  AM: 531 kHz (530 kHz in Canada)
- If you memorize another station of the same band to a key on which you have already memorized a station, the previous station will be erased.

You cannot erase a station without memorizing another station.

**To check your memory**
After memorizing the stations, press each counter key in turn to check that the desired stations have been memorized correctly. You can recall a station any time by pressing its counter key.

**HOW TO RECEIVE A MEMORIZED STATION**
Turn the power on, select the band and press the appropriate counter key. The memorized station will be received.



**Note:** If no batteries are installed for more than 3 minutes, all memorized stations will be erased.

AIR/PSB reception

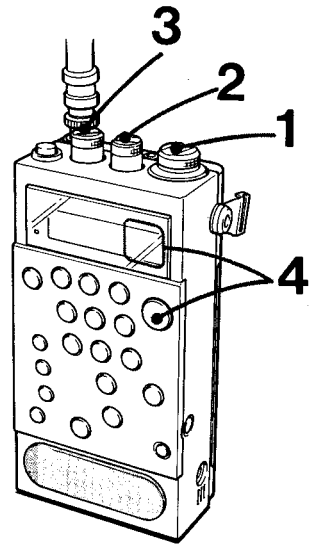
You can monitor aviation communications between aircraft and airport towers, such as a pilot's request for instructions, report of his position, and filling of his flight plans.

**For type 1 and 2 models,** you can monitor police, fire, forestry conservation, VHF weather, traffic and other public safety radio services, as well as the air band.

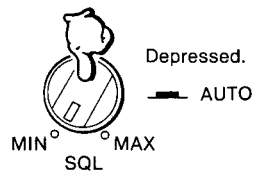
**Direct tuning, scan tuning, manual tuning and memory tuning**
Tuning procedure is the same as for FM or AM reception. See pages 12 to 18.
If necessary, set the SQL control to ■ MANUAL and adjust it. (See page 15.)

# MEMORY SCAN TUNING

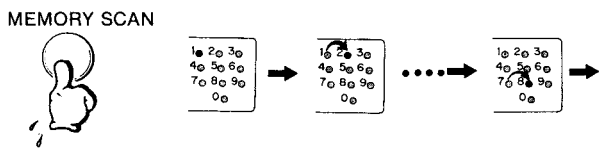
The stations memorized on the counter keys are scanned in sequence at the press of the MEMORY SCAN key and scanning stops automatically when a signal is received.
Memorize frequencies to all counter keys. (See "How to momorize a station" on page 17.)
Follow the numbered sequence.




1 Set the band selector to AIR or PSB.
2 Depress the SQL control (▬ AUTO).




3 Adjust the volume with the VOL control.
4 Keep the MEMORY SCAN key pressed for at least 0.5 second, then release it. The memorized stations will be tuned in continuously in the sequence ①→②→③···→⓪→①··· .




When there is a signal, scanning will stop. If the signal disappears, scanning begins again.

**To stop scanning,** press the MEMORY SCAN key again.

**To start scanning again when memory scanning has automatically stopped,** keep the MEMORY SCAN key pressed for at least 0.5 second and release it.

Each time you press the MEMORY SCAN key momentarily, a memorized station is tuned in.

Using the program function, you can change the sequence of memory scanning. (See page 20.)

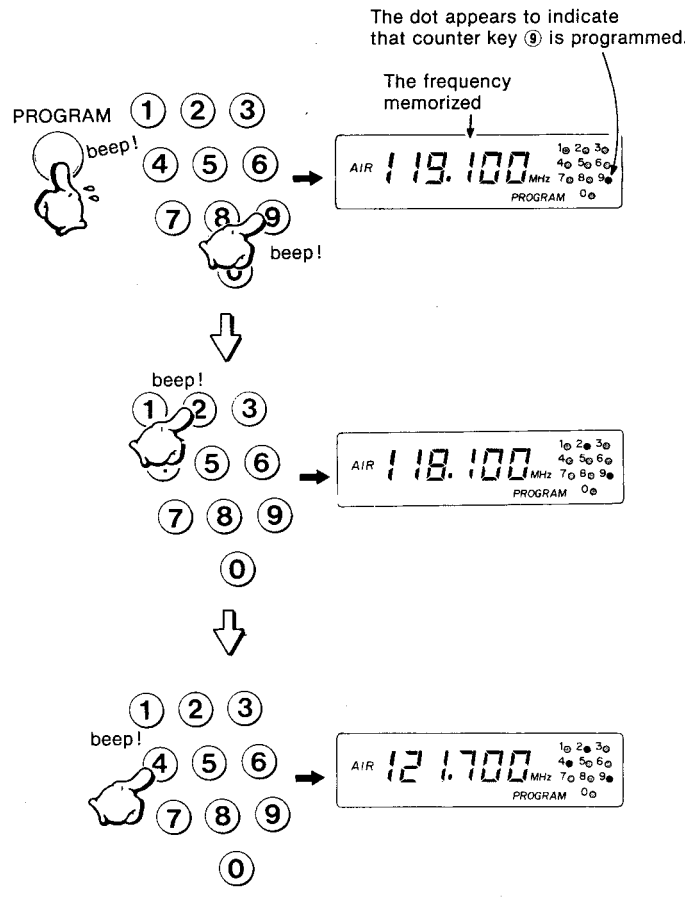
**If stations cannot be tuned in by scan tuning with the SQL control set to ▬ AUTO,** press the SQL control again (▬ MANUAL) and adjust the control. (See page 15.)

# PROGRAM FUNCTION

The program function is used to change the sequence of memory scanning or scan only certain keys.

**How to activate the program function**
Memorize frequencies to all counter keys.
Follow the numbered sequence.

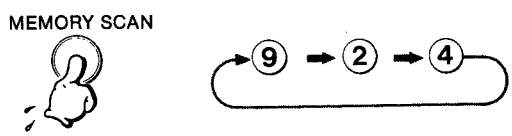
1 While pressing the PROGRAM key, press the counter keys in the desired sequence.




- During programming, the previous station is received.
- You can program the counter keys in any desired sequence of up to 10 scanning points, including programming the same counter key more than once.

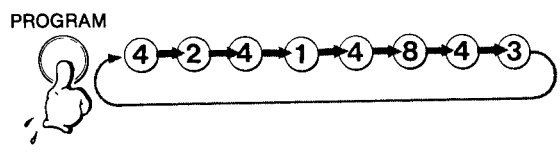
2 Press the MEMORY SCAN key to start memory scanning.

**To scan stations ⑨, ② and ④**

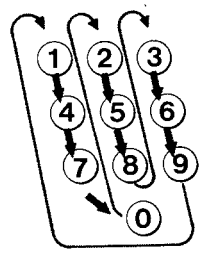



Example of programming

**To tune in a certain station memorized to the ④ key**



● The sequence of programmed scanning is factory set as follows.




● Since only 10 keys can be programmed, even if the eleventh key is pressed, it is not programmed.
● The program function can be activated and cancelled while another station is being received.

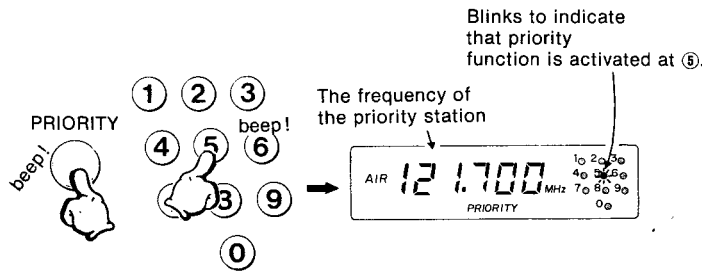
**To cancel the program function**
Press the PROGRAM key again. The PROGRAM indication in the display disappears. In this case, the sequence of memory scanning reverts to ①→②→③···→⓪→①···.

AIR/PSB reception

## PRIORITY FUNCTION

If you are particularly interested in listening to a certain station, designate it as the priority station.
The set automatically tunes to the station every 3 seconds to check whether there is a signal or not, even while another station is being received.

**To designate the priority station**
Memorize frequencies to all counter keys.
While pressing the PRIORITY key, press the counter key to which the desired frequency is memorized.
If more than two counter keys are pressed, the last key pressed designates the priority station.



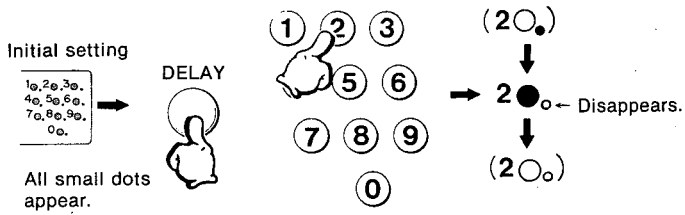

● The PRIORITY indication appears in the display.
A beep sounds and the corresponding dot blinks.
● When the priority station is tuned in every 3 seconds, the station being received will be interrupted for a fraction of a second.

**To cancel the priority station**
Press the PRIORITY key again. The PRIORITY indication and the dot in the display disappear.
● The priority function can be activated and cancelled while another station is being received.

## DELAY FUNCTION

Using the delay function, the station being received will be kept tuned in during memory scanning after the signal stops for approx. 2 seconds, i.e. during the interval between communications. The delay function is activated on all counter keys at the factory.

**To cancel the delay function**
While pressing the DELAY key, press the counter key on which the delay function is to be cancelled.




The corresponding small dot in the display disappears.

**To activate the delay function again**
While pressing the DELAY key, press the counter key on which you want the delay function to activate. The small dot in the display appears.
- The delay function can be activated and cancelled while another station is being received.
- Using the delay and priority functions simultaneously, you can receive a station continuously.

## EXTERNAL ANTENNA CONNECTION

See illustration I on page 5.
In a steel-frame building, mountainous areas or at a long distance from the transmitter, reception may be unsatisfactory with the helical antenna or the built-in ferrite bar antenna. In this case, connect a commercially available external antenna to the ANT connector or the AM EXT ANTENNA jack.

**To detach the helical antenna,** while pressing down the connector on the antenna, turn the antenna counterclockwise, then pull it out. See illustration J on page 5.

**Notes**
- The use of a suitable lightning arrestor is recommended if the antenna extends out-of-doors.
- Locate an outdoor antenna as far away from the street as possible.

For further details, see the instruction manual for the antenna.

## RECORDING A BROADCAST

See illustration K on page 5.
1 Tune in the desired station and adjust the volume to normal listening level.
2 Connect the ⑨ jack on the receiver to the microphone input jack on a recorder using the optional RK-64A connecting cord.
3 Set the recorder in recording mode.
The sound to be recorded cannot be heard from the speaker.

# SPECIFICATIONS

Circuit system
AIR/PSB/AM: Dual conversion superheterodyne
FM: Superheterodyne

| Band | | Frequency range | Tuning interval |
|---|---|---|---|
| PSB (type 1 and 2 models) | | 144–174 MHz | 5 kHz |
| AIR | | 108–136 MHz | 25 kHz |
| FM (type 1 and 3 models) | | 76–108 MHz | 50 kHz |
| FM (type 2 and 4 models) | | 87.6–108 MHz | 50 kHz |
| AM | SW | 1603–2194 kHz (1601–2194 kHz)* | 1 kHz |
| | MW | 531–1602 kHz (530–1600 kHz)* | 9 kHz (10 kHz) |
| | LW | 150–530 kHz (150–529 kHz)* | 1 kHz |

* Frequency range with the MW tuning interval (9 kHz/10 kHz selector) set to 10 kHz.

Antennas
AIR/PSB/FM: Helical antenna
MW/LW/SW: Built-in ferrite bar antenna
External antenna jack
AIR/PSB/FM: BNC connector
AM (LW/MW/SW): minijack

Speaker
Approx. 7 × 3.5 cm

Power output
400 mW (at 10% harmonic distortion)

Output
Earphone jack (minijack)

Power requirements
6 V dc
Four IEC designation R6 batteries (size AA) (for radio/computer back-up)
BP-23 rechargeable battery pack (optional)
DC IN 6 V jack accepts:
Appropriate ac power adaptor listed on page 10 for use on house current
DCC-127A or DCC-120 car battery cord (optional) for use with 12 V car battery
DCC-240 car battery cord (optional) for use with 24 V car battery
EBP-6 battery case (optional) using four IEC designation R14 batteries (size C)

Battery life
Approx. 9 hours for air band, PSB and AM reception
Approx. 10 hours for FM reception
When listening for four hours a day at normal volume, using Sony SUM-3(NS) New Super batteries

Dimensions
Approx. 90 × 179 × 50 mm (w/h/d)
($3\frac{5}{8} \times 7\frac{1}{8} \times 2$ inches)
including projecting parts and controls, not including the helical antenna

Weight
Approx. 600 g
(1 lb 5 oz)
including batteries, shoulder strap and the helical antenna

Accessories supplied
Helical antenna (1)
Battery holder (1)
Earphone (1)
Shoulder strap (1, see illustration L on page 5.)

Design and specifications subject to change without notice.

**Optional accessories**

AC power adaptor — See the list on page 10.
Rechargeable battery pack — BP-23
Car battery cord — DCC-127A, DCC-120, DCC-240
Connecting cord — RK-69A, RK-64A
LW/MW/SW wide range antenna — AN-1
Battery case — EBP-6
VHF antenna — AN-3

# TROUBLESHOOTING GUIDE

Should any problem occur with the set, make the following simple tests to determine whether or not servicing is required.
If the problem persists after you have made these tests, consult the nearest Sony dealer for further information.

**No sound is heard.**
- The VOL control is turned down completely.
- The SQL control is turned too far clockwise (towards MAX).
- The earphone is plugged in.
- Incorrect polarity of batteries. See page 3.

**Memory scanning does not begin, although the MEMORY SCAN key is pressed.**
- The SQL control is turned too far counterclockwise.

→ Turn the SQL control slowly clockwise. See page 15.
- The program function is activated and only one station is programmed. → Press the PROGRAM key to cancel the program function, or program two or more stations. See page 20.

**Memory scanning does not stop.**
- Signals are weak or the SQL control is set to MAX.

→ Turn the SQL control slowly counterclockwise (towards MIN). See page 15.

**The power is not turned on even if you depress the POWER switch (⏏ ON).**
- Weak batteries.
- Incorrect polarity of batteries. See page 3.

**Display is dim.**
- Weak batteries. → Replace all the batteries with new ones.
- The set is being used in extremely high temperatures or in a place with excessive moisture.

**Very weak or interrupted sound, or unsatisfactory reception.**
- Weak batteries.
- Tuning or antenna adjustment is not correct. → Tune in correctly. For antenna adjustment, see page 12.
- Weak signal. → In a vehicle or in a building, listen near a window.

**A frequency cannot be input in direct tuning.**
- After the DIRECT key or the counter key was pressed, the next key was not pressed within 5 seconds.

**A frequency cannot be memorized.**
- The memorizing procedure is incorrect. → To input a frequency, while pressing the ENTER key, press one of the counter keys.

**A memorized station cannot be received with memory tuning.**
- The incorrect counter key is pressed.
- The memorized station was erased because no batteries were installed for more than 3 minutes. → Memorize the station again.